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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/998,220 | 11/20/2001 | Terence J. Knowles | 13051US03 | 6206 |

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McANDREWS, HELD & MALLOY, LTD
34th Floor
500 W. Madison Street
Chicago, IL 60661

EXAMINER

NGUYEN, KIMNHUNG T

ART UNIT PAPER NUMBER

2674

DATE MAILED: 06/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/998,220

Applicant(s)

KNOWLES ET AL.

Examiner

Kimnhung Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on RCE and Amendment filed on 5/9/05.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

This Application has been examined. The claims 21-28 are pending. The examination results are as following.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 21-26 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weigers et al. (US 5,856,820) in view of Selig et al. (US 6,492,978).

Regarding claim 1, Weigers et al. discloses in figs 1-2 that a feedback mechanism for an acoustic wave switch having a touch sensitive surface comprising a flat substrate (20) overlaying the touch sensitive surface of the acoustic wave switch (see col. 3, lines 33-38), the flat substrate (20) in an unactuated position being spaced from the touch sensitive surface of the switch, and an acoustic wave absorbing material disposed between the flat substrate and the touch sensitive surface such that in response to a force acting on the substrate, the substrate deforms to contact the absorbing material (30, fig. 1) and absorbing material contacts the touch sensitive surface of the acoustic wave switch with sufficient pressure to actuate the acoustic wave switch (see col. 4, lines 23-29). However, Weigers et al. does not disclose that a deformable dome overlaying the touch sensitive surface. Selig et al. discloses in figs 1-4 that a touch system having a dome (see key (24, fig. 1, 4) disposed over the touch screen (see abstract, see col. 5, lines 48-51). It would have been obvious to one of ordinary skill in the art at the time the invention was made to

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implement the using of the key disposed over the touch screen as taught by Selig et al. into the system of Weigers et al. because this would be suitable modified for this type of touch screen to interrupt the acoustic signal by using the individual keys and also provide tactile feedback as desired.

Regarding claims 22-23, Weigers et al. discloses that the acoustic wave is mounted on a flat surface as discussed above. However, Weigers et al. does not discloses that the acoustic wave is mounted on a surface of the dome, and a surface of the dome is in the unactuated position of the dome. Selig et al. discloses that the acoustic wave is mounted on a surface of the dome, and a surface of the dome is in the unactuated position of the dome as discussed above.

Regarding claim 24, Weigers et al. discloses in figs 1-2 a feedback mechanism for an acoustic wave switch having a touch sensitive surface comprising: a flat substrate (20) overlying the touch sensitive surface of the acoustic wave switch and an acoustic wave absorbing material (30) mounted on the flat surface, the acoustic wave absorbing material being spaced from the touch sensitive surface of the acoustic wave switch when the flat surface (20) actuator is in an unactuated position and the acoustic wave absorbing material contacting the touch sensitive surface of the switch actuating the acoustic wave switch in response to a force acting on the flat surface (30) to move the acoustic wave absorbing material contact with the touch sensitive surface of the acoustic wave switch (see col. 4, lines 23-29). However, Weigers et al. does not disclose that an actuator overlaying the touch sensitive surface. Selig et al. discloses in figs 1-4 that a touch system having an actuator overlaying the touch surface (see key 24, fig. 1, 4, see abstract, see col. 5, lines 48-51). It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the using of the actuator disposed over the touch

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screen as taught by Selig et al. into the system of Weigers et al. because this would be suitable modified for this type of touch screen to interrupt the acoustic signal by using the individual keys and also provide tactile feedback as desired.

Regarding claims 25-26, Weigers et al. does not disclose that the actuator is a deformable dome and is a truncated dome. Selig et al. discloses that the actuator is a deformable dome and is a truncated dome (see fig. 4).

Regarding claim 28, Selig et al. discloses that the actuator includes a plunger extending through an aperture in a metal plate (see figs. 6, 8).

3. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Weigers et al. (US 5,856,820) in view of Selig et al. (US 6,492,978) and in view of Jaeger et al. (US patent 6,606,081) and McLoone et al. (US patent 6,556,150).

Weigers et al. and Selig et al. discloses an acoustic wave switch as discussed above. However, they do not disclose that the actuator includes a rocker having a pivot with a magnet mounted on the rocker on a first side of the pivot to hold the actuator in an unactuated position and the magnet returns the actuator to the unactuated position when the force is removed. Jaeger et al. discloses in figures 11-12, a touch screen device (81) is provided with a cover glass and supported by a magnet (84) (see column 7, lines 48-53). Mcloone et al. discloses in figures 16-17, a computer input device that comfortably supports the hand of the user while the thumb and finger are associated with buttons carried on the device having a rocker (148) that is pivotally coupled to the housing (see column 8, lines 63-67). It would have been obvious to

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one of ordinary skill in the art at the time the invention was made to implement the teachings of using a support member of magnet as taught by Jaeger et al. and the device having a rocker (148) that is pivotally coupled to the housing as taught by McLoone et al. into the system of Weigers et al. and Selig et al. because this would be slidably secured to the bar, and translation of the bar along the track combined with translation of the electromagnet along the bar, and selected location corresponding to a desired placement of the controller device (see Jaeger et al., column 3, lines 8-12), and for the rocker, it would be pivoted respectively forward or backward against its biasing to place the rocker in a forward position or backward position, and such an actuation will cause the input device to send an appropriate signal to the computer (see McLoone et al., see column 9, lines 1-9).

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimnhung Nguyen whose telephone number is (571) 272-7698. The examiner can normally be reached on MON-FRI, FROM 8:30 AM-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Edouard can be reached on (571) 272-7603. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kimnhung Nguyen
May 26, 2005



ALEXANDER EISEN
PRIMARY EXAMINER
TECHNOLOGY CENTER 2600